

Appl. No. 10/782,855

Please amend the Specification according to the following marked up paragraphs and sections.

BRIEF DESCRIPTION OF THE DRAWINGS

- 5
- FIG. 1. is a schematic view of the cross-section of the preferred embodiment of the prestressed tubular belt;
- FIG. 2 is a cross-section view depicting the schematic force arrangement of outer and inner forces acting on the random cut off edge portion of the tubular belt;
- 10
- FIGS. 3A-D are cross-section views showing an initial position and the three stages of production of the prestressed tubular belt with variable prestressing along the width of the belt;
- FIG. 3E is a cross-section view showing a process for producing a prestressed tubular belt with two stages of production, with the last stage shaping the designed configuration of the
- 15
- portion of the belt without prestressing;
- FIGS. 4A-C & 5 are cross-section views depicting an initial shape of four possible versions of the outer (non-prestressed) layer of the belt;
- FIGS. 6A-C are cross-section views showing the process for producing a
- 20
- prestressed tubular belt with a single stage production;
- FIGS. 7A-C & 8 are cross-section views showing a final shape of three possible versions of the prestressed tubular belt corresponding to FIGS. 4A-C and 5;
- FIG. 9 is a cross-section view showing initial arrangement of the
- 25
- inner layer with attached anchor strips and the multi-step prestressing device;

Appl. No. 10/782,855

- FIG. 10** is a cross-section view showing the inner layer that is stretched out with the help of a guided grip. The first attached anchor strip is in the proper position to be engaged with the multi-step prestressing device.
- 5** **FIG. 11** is a cross-section view showing the second stretch (first release) of the inner layer with help of a guided grip. The first attached anchor strip is in its final position and the second attached anchor strip is in a position to be engaged with the multi-step prestressing device;
- 10** **FIG. 12** is a cross-section view showing the third stretch (second release) of the inner layer with help of a guided grip. The first and second attached anchor strips are in their final positions and the third attached anchor strip is in a position to be engaged with the multi-step prestressing device;
- 15** **FIG. 13** is a cross-section view showing the finishing stretch of the inner layer. Once the guided grip is released, the end of the inner layer and all attached anchor strips are in their final positions;
- 20** **FIG. 14** is a cross-section view showing a final part of a process for making a prestressed tubular belt in a single step utilizing a multi-step prestressing device. The outer layer with longitudinal edges is applied in full length to the multi-step prestressed inner layer. The area of the belt along the longitudinal edges is shaped to the designed configuration without prestressing;
- 25** **FIG. 15** is a cross-section view showing the guided grip device for stretching the inner layer;
- FIG. 16** is a plan view of the guided grip device shown in FIG. 15;
- FIG. 17** is a section view along line 1-1 of Fig 16;

Appl. No. 10/782,855

- FIG. 18** is a schematic plan view illustrating the generation and constancy of various prestressed zones at various portions of the inner belt width;
- FIGS. 19 – 22** schematically depict side elevation views and transverse cross-sections of reinforcement bands for the tubular belt;
- FIG. 23** is a transverse cross-section view of an embodiment of the tubular belt, which can incorporate the reinforcements of FIGS. 19 – 22;
- FIG. 24** is an elevation view of a simplified auger mandrel used for creating a vulcanized spiral spring-like product;
- FIG. 25** is an elevation view showing a vulcanized spiral spring-like product resulting from the use of the auger mandrel of FIG. 24;
- FIG. 26** is an elevation view showing special fillers installed on the auger mandrel of FIG. 24 used by a method according to an embodiment of the invention;
- FIG. 27** is an elevation view showing the first stage product resulting the use of the auger mandrel of Fig. 26;
- FIG. 28** is a plan view of a flattened first stage product resulting the use of the auger mandrel of Fig. 26;
- FIG. 29** is an elevation view showing a second stage of the process of making a tubular belt on mandrel using a first stage product made on the auger mandrel of FIG. 26; and
- FIG. 30** is a cross section view of the round shape tubular belt resulting from the use of mandrels of FIG. 26; and

Appl. No. 10/782,655

FIG. 31 is a top view of the tubular belt bent around a conveyor path bending radius and the appertaining sectional view of the belt itself.

- 5 [0024] Only a tubular belt constructed by this invention may be routed to make, for example, and referring to FIG. 31, a continuous 360° turn having a conveying radius r_{conv} as little as only ten times its diameter d_{belt} , and be operational in such a configuration. This construction permits turns having radii r_{conv} as small as 200, 100, 50, 30, 20 or even 10 times the diameter of the belt d_{belt} .
- 10 which is significantly smaller than turns having a radii that are 300 times the diameter for belts according to the prior art. For example, using the designs incorporated herein, it has been demonstrated that a belt 6" in diameter d_{belt} are operable in a curve having a radius of $r_{conv} = 5'$.